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AUTHOR Marston, P. T.; Borchardt, L. M.
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ABSTRACT

Previous research studies show that interacting elements affecting reported classroom observation of teacher behavior are: (1) teacher characteristics; (2) observer characteristics; (3) influence of status characteristics upon social interaction; (4) effect of sex and topic on judgment of competence; (5) beliefs concerning teaching and teaching research held by the observer; (6) effects of observer preconceptions and personal biases; (7) effects of environmental conditions, physical condition of the observer, judgment habits, and level of difficulty of the experiment; (8) effects of time constraint on observational situations; (9) observer expectations; (10) self concept of observer; (11) observer opinions and attitudes; and (12) characteristics of instruments used in coding observed teacher behavior. A list of thirty-three characteristics of observers who may act as raters for educational research is provided to explain rater behavior. The operation of bias in the coding process which may be due to elements other than the situation and the instrument used is described. (JD)

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REVIEW OF LITERATURE AND RESEARCH: BIAS IN TEACHER OBSERVATION

P. T. MARSTON AND L. M. BORCHARDT

RESEARCH AND DEVELOPMENT CENTER
FOR TEACHER EDUCATION

THE UNIVERSITY OF TEXAS AT AUSTIN

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REVIEW OF LITERATURE AND RESEARCH: BIAS IN TEACHER OBSERVATION

Definition

Webster's Eighth New Collegiate Dictionary (1977) gives the following definition of "bias" as applied to the behavior of people and the effect it may have upon statistical measurements of the behavior of people.

As a noun:

> a)...an inclination of temperament or outlook; especially a highly personal and unreasoned distortion of judgment: Prejudice. b) bent, or tendancy. c) (1) deviation of the expected value of a statistical estimate from the quantity it estimates. 2) systematic error introduced into sampling or testing by selecting or encouraging one outcome or answer over others...

As a verb:

> 1) to give a settled and often prejudiced outlook to (his background... against foreigners)...

This partial definition gives us a good idea of the complexity of this term "bias." Bias is undoubtedly a pervading influence in any attempt to measure human behavior, but the major concern of the Evaluation of Teaching Project centers around the effects of bias in the measurement of teacher behavior in the classroom. Bias is an "unknown" or untestable factor present in observation of teacher behavior. The concept considered here is very broad: it is not just undesired attitudes on the part of the observers, but also includes the full range of factors which can influence the way the observer interprets what he or she sees. Several researchers have ventured definitions of bias as it is found in teacher observation. Simon (1969) defines observer bias as a "tendancy to observe the phenomenon 'under study' in a

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manner that differs from the 'true' observation in some consistent fashion." Tactics to reduce bias are described: 1) train observers carefully; 2) be specific in describing the task; 3) use detailed instructions, 4) require immediate and detailed reporting; 5) use camera and recording equipment whenever feasible; 6) have more than one observer and have reliability checks. Kolman (1975) goes on to say that "biased observations are systematic distortions of social 'reality.'" Tesser and Rosen (1975) point out the importance of understanding the ways in which our knowledge of the world may be distorted or biased, and list the primary sources as (1) direct sensory experience, (2) inference from what is known, and (3) information from others. W. I. Thomas (1923) did some very early work in attempting to explain the process taking place in observer bias, and termed it "definition of the situation." Stebbens (1967) presents a theory of definition of the situation in which he delves into the problem by addressing two main questions: How does a person arrive at a definition of the situation and what is the relationship between this definition and behavior in the situation? He begins by distinguishing between the objective situation (defined as the immediate social and physical surroundings and the current physiological and psychological state of the actor) and the subjective situation (those components of the objective situation which are seen by the actor to affect any one of his action orientations and therefore must be given meaning before he can act). Two categories of factors which affect the defining of the subjective situation were given:

personality-cultural and situational.

The Elements of Bias

There are at least three points at which bias enters the picture in teacher observation. These different elements of bias interact with one another to affect the reported observation. These three points include 1) the teacher being observed, 2) the observer, and 3) the characteristics of the instruments or methods used in observation.

The Teacher Being Observed

Persons being observed may do things differently or deliberately to influence the observer. Just the fact that the teacher is aware of being observed or may have some preconceived notion of the intent of the observation can change the behavioral report. Experimenter bias may come into play here--probably not in the form of intentional biasing, but rather in the form of conveying expectations to the observed teacher which may alter behavior. In discussing the methods used in a study of classroom activities where videotapes were employed as a method of collecting data for later observer analysis, Biddle and Adams (1967) felt that the use of videotapes in the classroom to record behavior did have some slight effect on the behavior of the teachers filmed. When they informally interviewed participating teachers, some reported some tension at the beginning, some reported "dressing up" for recording days, and a very few reported less behavor problems with students on recording days. This "effect" they reported went relatively unmeasured, but obviously videotaping had some effect on the teacher and class,

whether good or bad. Clearly, an observer coding these tapes at a later date would have a slightly distorted view of the teacher, at which point some bias could enter the picture.

The Observer

Two kinds of bias may be associated with the observer: past (internal) and current or present (external). These interact with one another to influence the outcome of observation.

Past (internal) bias. These are the biases which the rater brings with him to the situation: attitudes and prejudices already formed; personality variables such as susceptibility to change in beliefs and opinions, dogmatism, democracy, etc.; status characteristics such as social class; previous experiences with teaching (expectancies, beliefs about teaching, etc.); also, the amount and kind of training in observation previously received.

Allport's (1954) classical work, The Nature of Prejudice, provides a good picture of the workings of prejudice in people, and can be applied directly to the phenomenon as it can and must occur in observers. Some excerpts from Allport's insightful generalizations about prejudice are as follows:

> Man has a propensity to prejudice. This propensity lies in his normal and natural tendancy to form generalizations, concepts, categories, whose content represents an oversimplification of his world of experience.
>
> In summary, in-group memberships are vitally important to individual survival. These memberships constitute a web of habits. When we encounter an outsider who follows different customs we unconsciously say, "He breaks my habits." Habit-breaking is unpleasant. We prefer the familiar.
>
> . . . For we now see that prejudice is a complex subjective state in which feelings of difference play the leading part, even if the

differences are imaginary.

> Impressions that are similar, or that occur together, or that are spoken of together, especially if a label is attached..., tend to cohere into categories (generalizations, concepts).
>
> Categories help us to identify a new object or person, and to expect from it (him) a certain kind of behavior to accord with our preconceptions. When evidence conflicts with categories, it may be distorted (through selection, accentuation, interpretation) so as to seem to confirm the category.
>
> A stereotype, then, is not a category, but often exists as a fixed mark upon the category. . . . It is rather a fixed idea that accompanies the category.

Because teacher observation deals with people, then we must necessarily consider the role that prejudice plays in the accuracy of any person's assessment of another person's behavior.

Guilford (1954) did extensive work in the area of rater characteristics, listing some 33 characteristics of raters which he compiled from an extensive search of the research literature. This list is quite valuable as a guide to explaining rater behavior and understanding the operation of bias in the coding process which may be due to elements other than the situation and the instrument used. Another use would be as a guide for use in coder selection and training.

1. Individuals differ in the capacity to judge others, but there is no such thing as a general judicial capacity.

2. Raters disagree because they observe the individuals in different types of situations.

3. Two ratings by the same rater are no more valid than one. The reason for this is apparently that a rater repeats the same constant errors a second time, and the means of his ratings therefore deviate just as far from the truth as do the single judgments.

4. Raters do much better if interested in the ratings they make.

5. Raters should have sufficient time for making the ratings.

6. Raters do much better if they have educational and professional backgrounds similar to those of the ratees.

7. The ability of any rater to rate a specified trait should be determined. The correlation of his ratings with a pool of ratings by others is the accepted test.

8. The good judge of self is more intelligent and more observing than the good judge of others.

9. The good judge of self tends to be happier, less irritable, more sympathetic and generous, and more courageous than the good judge of others.

10. The good rater is not necessarily self-consistent, nor is the self-consistent rater necessarily a good rater.

11. For certain admirable traits there is a positive correlation between possession and the ability to judge. The reverse of this is true in general for undesirable traits.

12. One who knows himself best also judges others better in certain traits.

13. Raters do better if carefully trained with respect to the distribution of abilities, the nature of the scale, and cautions against errors such as the halo effect, central tendancy, overrating, prejudice, and the logical error.

14. Raters tend to rank themselves in a group less accurately than they rank others. This is largely due to the systematic errors of the rater.

15. Raters tend to overestimate themselves in most traits and to underestimate themselves in few.

16. Raters do not always overestimate themselves in desirable traits.

17. There are individuals who overestimate themselves in all traits and others who underestimate themselves in all traits.

18. Men are more lenient in their ratings than women.

19. Raters rate their colleagues, fellow students, or fellow teachers higher than they rate others.

20. Self-ratings are too high on desirable traits and too low on undesirable traits.

21. There is a tendency to overrate members of the same sex as compared with members of the opposite sex.

22. In self-ratings, superior individuals underestimate themselves and inferior individuals overrate themselves, the latter having the greater error.

23. Parents overrate their children as a rule, but they may underestimate very superior children.

24. Personally selected raters, selected by those who are to be rated, tend to rate an individual higher than he rates himself.

25. The assurance of a rater is of some importance. Judgments of which he is very sure are much more reliable than ordinary ratings.

26. Ratings may be influenced by the raters knowing the purpose for which they are to be used. To avoid this error, ratings should be secured with the raters in ignorance of their use and if possible at a time in advance of the situation demanding their use.

27. Different raters use different criteria in judging the same trait. For this reason it is sometimes desirable to ask the rater to state the bases upon which his own judgments are made.

28. The leniency error is much greater when the rater must confront the ratee with results of the ratings.

29. The error of leniency is less for ratings made on descriptive scales than for those

made on evaluative scales.

30. Length of acquaintance leads to substantial errors of leniency.

31. The influence of length of acquaintance upon ratings correlates negatively with the IQ of the rater.

32. Training reduces the effect of length of acquaintance.

33. Intelligence of raters is related to the reliability of ratings.

Berger, Cohen, and Zelditch, Jr. (1972) looked at the influence of status characteristics upon social interaction. Their literature review yielded the conclusion that status characteristics such as age, sex, and race determine the distribution of participation, influence, and prestige among group members, independent of any prior cultural belief in the relevance of the status characteristic to the task. Knowledge of these status characteristics would be useful in coder screening or selection, and later in explaining the presence of bias in the coder's assessment of teaching behaviors.

Weissbach (1974) and his associates experimented with the effect of sex and topic on judgments of competence. Their study, involving 64 volunteer men and women students who listened to eight taped debates, focused upon conditions which affected competence ratings: 1) sex of person performing the task, 2) sex-typed appropriateness of the task, 3) subject attitudes toward traditional sex roles. Of two debate topics, one was assumed to be typically masculine, the other typically feminine. After listening to the tapes, each subject rated each debater for quality on a seven-point scale. Two separate analyses of the

ratings were performed for the same sex and mixed sex debates. Findings were consistent with predictions that sex and topic do affect ratings. In the case of teacher ratings, this probably would not come into play as much; however, conceivably a rater's feelings about women vs. men teachers teaching certain subjects, or the perceived differential treatment a teacher may give boy or girl students, could affect ratings. The fact that there are individual differences in both intensity and extremity of responses to attitude and expectancy questions and that these may be attributable to differences in need for security has been brought out by Brim (1962). He points out that, heretofore, such differences have been thought mainly attributable to differences in "verbal habits", or the habit some people may have of responding strongly to descriptive words, while others do not. Brim feels that these differential responses are mainly the effects of different degrees of motivation to escape from uncertainty. If this factor is to be taken into consideration when observers use rating scales (as it probably should), then the raters should be assessed in some fashion as to their verbal habits and their need for security before the rating task, or there should be some formula for adjusting for this bias when processing the data.

There are many widely held expectancies or preconceptions about teaching or people who teach, and these undoubtedly affect the way a coder perceives the behavior of a teacher in the classroom, whether in an experimental or real-life situation. Every person has had educational experiences, some more than

others, which shape the way he feels about teachers and teaching. Not much work appears to have been done in the area of the effect of coder beliefs about teaching on teacher observation but quite a large amount has been done with regard to the effect of teacher expectancies on pupils' performance by such researchers as Rosenthal and Jacobson (1966, 1969, 1975).

Dunkin and Biddle (1974) enumerate several widely-held beliefs concerning teaching and teaching research, including:

1. Teaching as an art (as such, can it be subjected to scientific measurement?)
2. Teaching as obvious (its activities and effects are too obvious to require research)
3. Teaching as ineffective (teaching is inherently ineffective; the teacher and school only provide the learning environment and children learn according to their own abilities)
4. Teaching as a reflection of learning (learning is easier to assess than teaching, so learning has been widely researched, neglecting teaching itself; thus historically learning has tended to be viewed as a reflection of teaching, rather than the other way around)
5. Discovery learning (notion that teachers should encourage pupils to discover rules, principles and generalizations for themselves)
6. Curricular innovations (the notion that the quality of pupil learning can be improved by changing the

curricula rather than concentrating on the techniques for teaching)

7. Generality of teaching skills (the belief that the elements of effective teaching are similar across all grade levels)
8. Performance criteria for teaching (belief in the value of standards for classroom behaviors of teachers and pupils that presumably reflect "good education")

It is probably safe to assume that observers more than likely hold similar beliefs about teaching, drawn from their own exposure to education. Of course, the degree to which they believe these generalizations may be altered greatly by their own individual experiences or amount of knowledge about education.

As a first step in determining the effects that certain beliefs about teaching may have on the coding of teacher behavior by trained observers, it is necessary that these prior beliefs and attitudes be accurately assessed and interpreted. Kolman (1975) conducted research in which an attempt was made to bias college students' observations of a videotape of children at play. The observers were asked to record all aggressive behavior exhibited by the children, after they had received biased information regarding socioeconomic status of the children. Also, degree of ambiguity of objective situational factors was varied. Results showed the observers were affected by the prior knowledge, but the ambiguity had little effect. Kolman points out that those doing observational research need to ascertain any

beliefs, expectations, or experience related to the subject being observed. Herbert Kelman (1961) investigated the process of opinion change as a foundation for inferring the meaning of attitude and opinion data. He presented a theory of three processes by which persons respond to social influence: (1) compliance (accepting influence from another person or group in hope of achieving a favorable reaction from the other); (2) identification (when an individual adopts behavior derived from another person or group because this behavior is associated with a satisfying self-defining relationship to this person or group); (3) internalization (when an individual accepts influences because the induced behavior is congruent with his own value system). Kelman gives, as an implication of his research with these theories, that we can make certain predictions about the future course of a given opinion if we know something about the interpersonal circumstances under which it was formed.

If Kelman's observations are true, then predictions about observer behavior in teacher observation situations could perhaps be accomplished by an interview which would reveal the perceptions which a person might have about the group, i.e., assessing a coder's perceptions about the teaching task and inferring the process by which each particular opinion was adopted, and hence the level at which it is held. In such a way, Kelman suggests one might be able to predict the future conditions under which an opinion would come into play.

Present or current (external) bias. This would be the bias which occurs as a result of the situation: the particular

teaching situation being observed and the ongoing behavior of the teacher being observed. Included would be the characteristics of the teacher and students being observed, such as age, SES, race, social class, appearance of the teacher (what kind of dress is she wearing, is she smiling, etc.), and general characteristics of the class. Also, environmental considerations are involved, such as age and condition of the building, the community surrounding the school, etc., organizational characteristics of the classroom, such as open or traditional, plus the actual physical condition of the observer (tired, angry about something, disinterested in the task, the time of day, etc.). Any factual information the observer may be given about a classroom or teacher in an evaluation setting may influence the objectivity of the observation. Also involved here would be any purposeful manipulations of the situation, i.e., intentional biasing of the observation experience by the experimenter. Specifically, we are talking here about bias brought about by the actual coding setting, exclusive of such other factors as rater characteristics and characteristics of the instruments themselves. The area of attitude change must be investigated here as an element which may come into play in the observation situation. Theories of attitude change are quite complicated and really involve a whole other field of investigation. Because attitude change during the course of observation may be an important element in the biasing of observation we shall delve somewhat shallowly into the subject at this point, only enough to impress the reader with just how important this element may be. Triandis' (1971) book on Attitude

and Attitude Change thoroughly investigates the social psychology view of attitude change. He reviews Sherif's (1935) work on the autokinetic effect--i.e., subjects are strongly influenced by judgments made by other people in an ambiguous situation. Triandis also cites Berg (1966), who found that verbal racial attitudes did not predict agreement with a black or white confederate in a situation involving autokinetic judgments. Conflicts between norms and behaviors "undo" the effect of attitudes on behavior. Insko (1967), in an overview of theories of attitude change, reviews Hovland, Janis & Kelley's Reinforcement Theory (1953), which states essentially that the main ways in which persuasive communications give rise to attitude change is through production of a related opinion change.

Guilford (1954) extensively discusses the effects of environmental conditions, physical condition of the observer, judgment habits and sets (randomly guessing, etc.), the level of difficulty of the experiment (high- level experiment, high-level bias--i.e., observers will, in difficult situations, grasp at anything for clues, such as a smiling face.). Moscovici (1967) conducted some research that might point out such things as effects of time- constraint on observational situations. He found that the more explicit the time pressure, the fewer words per minute were used in the discussions of "the effects of movies on juvenile delinquents" which he used in his experiment.

The effects of experimentally induced expectations upon the behavior and performance of teachers and pupils have been well

documented. Rosenthal and Jacobson (1966) investigated the effect on pupil IQ of differential information given to teachers, showing that there was definite effect, with the teachers' high expectations for pupils producing greater IQ gains in those pupils than those for which teachers had lower expectations. Rosenthal (1964, 1966) did other research which indicated that experimenters' expectations do indeed influence pupil achievement.

Orne (1962) discovered "demand-characteristics" or cues which unintentionally communicate expectancies to pupils. Beez (1968) investigated the effect of false psychological reports on the behavior of teachers and pupil performance in a group of 60 Head Start children, and found that teachers who had received favorable expectations of a pupil tried to teach more symbols than did those given unfavorable expectations. There were also significant differences in pupil achievement. Meichenbaum, Bowers and Ross (1969) worked on the teacher expectancy effect also, finding that expectancy instructions differentially affected teachers' behavior in an institutionalized adolescent female offender situation, and the pupils teachers thought were "late-bloomers" showed significantly more academic improvement after one month. All these studies, as well as many others unmentioned, point clearly to the fact that teachers are susceptible to being biased in their expectations, thus changing their behaviors and thus the outcome of their teaching. The same would seem to be true in the possibility of manipulation of coders' expectations and beliefs, thus changing their behavior

(coding).

Kolman (1975) reviewed previous research on experimenter bias, pointing out that experimenter effects fall into general categories: (1) non- interactional--operate without affecting the actual responses of subjects; (2) interactional--result from experimenter's interaction with subjects and influences subjects' responses. Kolman points out some others' work, White, Hegarty and Beasley (1970) and Cordaro and Ison (1963), who have done empirical work focusing on observer bias, suggesting that observer bias can be experimentally produced when prior information concerning the observational situation is given to observers, i.e., experimental manipulation. Cordaro and Ison performed a classical experiment which would tend to provide proof of experimenter influence or manipulation on an observer. Three groups of undergraduate college students were given differential expectancies about S's behavior prior to their observations of planaria undergoing conditioning. Observations of number of contractions and head turns varied extremely among the three groups. The differing expectancies produced by the experimenter in the observers definitely biased what they reported. The observers "saw" what they were led to expect to see. White, Hegarty and Beasley replicated an experiment by Argyle and Dean (1965) where they found the total amount of eye contact between two people holding a conversation increased as the distance between them increased. For the replication, 23 first-year psychology students acted as observers assigned randomly to two groups. The two groups were given differing

amounts of information regarding what they were to see, with the second group being told the Argyle and Dean hypothesis about the outcome. The two groups then viewed two confederates discussing TAT pictures across a table. Results indicate that observers who were aware of the hypothesis distorted their observations in the direction of the predictions. Kolman says observer bias is an example of an instance in which subjective factors play a large part in the formulation of the definition of a situation. Objective factors are secondary mostly when they are unclear and ambiguous. If the objective factors of a situation are clear and easily recognizable, an observer's definition will not be under the influence of subjective factors to the same extent, and bias will be less. Kolman reported an experiment in which an attempt was made to bias college students' observations of a videotape of children at play. The observations were definitely affected by the biased information provided. Observers were given previous information as to the children's SES and then told to record all instances of aggressive behavior exhibited by the children in the videotapes. Observers recorded more aggressive behavior when they thought the children in the videotape were lower SES.

The "principle of suggestion" has been researched by Coffin (1941), who states the idea came from the hypnotists of the latter half of the nineteenth century, was taken from them by the early sociologists of that period, and was then taken up into experimental social psychology. More recently there was a shift toward increasingly more complex types of suggestion. The author generalizes from the reviewed research to say that "suggestion"

may be a general term embracing many psychological processes. One cannot glibly speak of high and low degrees of suggestibility without specifying particular conditions under which the degree of suggestibility has been observed. Coffin conducted a series of experiments which looked into the following: attitudinal conditions of suggestion, situational conditions of suggestion, difficulty of the problem and knowledge, and ambiguity of the stimulus. Subjects used were college students. Two principal relationships emerged: 1) the first experiments brought out the importance of preexisting attitudes in determining the acceptance and rejection of suggestions, and 2) the later experiments showed relationships of suggestibility to characteristics of the situation such as difficulty and ambiguity. Among the things he found were:

1. Subjects accept in general those suggestions which "fit" with their existing attitudes, even if alternative suggestions are available, offered simulataneously, and in similar manner.
2. Individuals tend to accept suggestions which are in agreement with their expressed attitudes and to reject those conflicting with such attitudes.
3. There is a negative correlation between suggestibility and intelligence in terms of the common operations involved in arriving at the various results.

4. Evidence points to a condition of ambiguity or difficulty as optimal for the production of general suggestibility. The experimenter by his suggestions may provide the subject with the needed structuration in an ambiguous or difficult situation.

Felton (1971) researched the functioning of task ambiguity and subjects' internal-external control in the phenomenon of experimenter expectacy effect. An initial group of 116 male students was tested and dichotomized as to internal-external locus of control. Three Internal and three External E's each tested six internal and six external Ss who indivually rated ten high-ambiguity or ten low-ambiguity photographs. As was expected, high-ambiguity Ss, Internal E's, Ss and External Ss all approximated the expectancy score significantly better than did the others. Thus, the expectancy effect was present, and the strength of its presence was a function of task ambiguity and Ss' and E's internal-external loci of control. observations were definitely affected by the biased information provided.

Such elements of the situation as communication between coders, or between coders and experimenters, can play a large part in the biasing of observations. Tesser and Rosen (1975), after reviewing research, summarized by saying that a variety of environmental factors determine who communicates with whom: (1) actual or perceived time available for conversation; (2) physical distance separating people; (3) functional distance, i.e., language, cultural differences, setting, etc. They also point

out selectivity of the recipients of information, in that listeners select out what they want to hear or see and be influenced by in communicating with others. Tesser and Rosen also discuss the encoding and decoding of messages. Encoding is affected by such elements as whether the communicators are strangers or friends, have like of dislike for each other, and their equality of status or age group. The context in which a message is embedded can influence the way it is decoded. This would involve the credibility of the source. Thus, the credibility of the source of discrepant information would directly influence the amount of bias introduced into a situation.

Kelman's (1961) research tested the differences credibility may make in expression of opinions. He used Negro college freshmen, who were exposed to a tape-recorded interview dealing with an aspect of the Supreme Court decision on school desegregation. Four versions were played to different groups. The versions differed only in the way the communicator was introduced and presented himself at the beginning of the interview, the difference mainly designed to vary the source and degree of power. Results showed differences in attitudes and the way they were expressed by the listeners after the four differing presentations.

Hovland and Weiss (1951) investigated the effect of apparent trustworthiness of the communicator on attitude change. They used undergraduate Yale University students who were in an advanced history course in their study. They filled out an

opinion questionnaire a week before receiving persuasive communications from communicators of varying "trust-worthiness." More attitude change was produced by a persuasive message if the message were attributed to high-credibility sources.

Characteristics of the instruments themselves. Certain characteristics of the instruments used in coding observed teacher behavior may introduce bias. Guilford (1954) gives an extensive review of research into different types of instruments and their vulnerability to different types of rater bias. Discussed are constant errors in use of rating scales such as error of leniency, central tendancy, halo effect, logical errors, contrast errors, and proximity errors. These different types of errors are defined as follows:

> Error of Leniency - raters tend to rate those whom they know well, or in whom they are ego-involved high than they should. Generally, this term is applied to rating too high or too low, regardless of the reason.
> Central Tendancy - raters hesitate to give extreme judgments and tend to displace individuals in the direction of the mean of the total group. Probably this is more common in rating individuals the raters do not know well.
> Halo Effect -judgment of individuals in a direction based upon a general overall impression of the individual. Individual traits tend to all be rated in the same direction.
> Logical Errors--similar to the halo effect. Raters are likely to give similar ratings to traits that may seem logically related to each other in the mind of the rater.

Also pointed out are the differences in high- and low-inference systems and their respective advantages. One thing he specifically mentions is the "ratability" of traits. Certain traits are easier to rate than others and draw more agreement among raters. He lists the advantages of rating scales over

pair-comparisons and rank-order methods; however, rating scales are somewhat subject to bias. Another area where bias may possibly enter involves the construction of the rating scale itself: whether Thurstone, Likert, or Guttman type. Briefly, the characteristics of these type attitude instruments are: 1) Thurstone Method--use of opinions to measure attitude, scaling of opinions; 2)Likert Method--multiple choice, scale of responses, weighted scoring; 3) Guttman Method--scale analysis. Guilford says the Thurstone or Likert are probably the best, depending on the results desired. Some very early research by Symonds (1925) concluded that ratings and rankings are equally reliable, but suggested rating scales might be improved by adapting the advantages of both methods into one scale. By rating, we mean the assigning of a position on a scale of already defined steps. Ranking is the placing of individuals in a rank order, such as using "little" to "much", "good" to "bad", etc. Symonds cites a series of experiments in which he found the two methods equally reliable. Two seventh-grade teachers were instructed to rate on a graphic scale a class of 40 pupils on seven traits and seven habits. After a week the teachers ranked the same pupils on the same traits and habits. Two other teachers followed the same program, except that they ranked first and rated second. Results were approximately the same in both methods. He recommends an improved method where, using a chart instead of the usual method of going through the traits of each individual in a single step, all individuals in a group are rated on a single trait before moving to the next trait. He also discussed the halo effect in

ratings and showed how to determine this through partial correlations. Symonds' data revealed that there seem to be real differences in the rating of traits and habits, but it seems that the difference is not one of habits versus traits, but rather is due to other factors. These include: (1) the trait or habit is not easily observed; (2) the trait or habit is not commonly observed or thought about; (3) the trait or habit is not clearly defined; (4) the trait or habit involves reactions with other people, rather than mere personal behavior; (5) the trait or habit is one with high moral importance in its usual connotation.

Berman and Kenny (1976) conducted a study in which pairs of traits that are commonly assumed to be either positively correlated, uncorrelated, or negatively correlated were assigned to fictitious stimulus persons in such a way that there was actually either a positive, zero, or negative correlation between the two traits in each pair. Twenty subjects completed a questionnaire to assess commonly shared notions of how personality traits go together. A separate set of 30 subjects then participated in the main experiment which consisted of a rating task. Subjects made trait ratings of the stimulus persons and correlations were derived from these ratings. Correlational bias was found that appeared to be constant not only across different levels of actual correlation, but also across ratings made at different times.

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